

A REVIEW OF THE GENUS *MICROTHURGE*  
(HYMENOPTERA: MEGACHILIDAE)

TERRY L. GRISWOLD

USDA–ARS Bee Biology and Systematics Laboratory, Utah State University,  
Logan, Utah 84322-5310

*Abstract.*—A new South American *Microthurge*, *M. furcatus* NEW SPECIES, is described. *Microthurge boharti* NEW SYNONYM is synonymized with *M. corumbae*. The male of *M. pharcidontus* is described. New records and keys to the species for males and females are presented.

*Key Words.*—Insecta, taxonomy, bees, floral records

In a recent revision of the megachilid subfamily Lithurginae (Michener 1983), a new genus *Microthurge* Michener was described to accommodate a small group of heriadiform bees from southern South America. Four species were included: *Microthurge pygmaeus* (Friese), *M. pharcidontus* (Moure), *M. boharti* Michener and *M. corumbae* (Cockerell), the last based only on the description, because Michener was unable to locate the type. Here, I report on the identity of *M. corumbae*, the discovery of a new species, describe the male of *M. pharcidontus* and give new records for the genus. Depositories for specimens (cited by cities) are: University of California (Davis), University of Kansas (Lawrence), American Museum of Natural History (New York), Philadelphia Academy of Sciences (Philadelphia), Carnegie Museum of Natural History (Pittsburgh), USDA Bee Biology and Systematics Laboratory (Logan).

KEYS TO SPECIES  
Males

- 1. Scutal surface roughened medially by transverse rugulae; scutellum rounded in profile; mesopleural surface granular ..... *pharcidontus* (Moure)  
Scutal surface not roughened by transverse rugulae; scutellum flat in profile; mesopleural surface shiny ..... 2
- 2(1). Hind basitarsus with ventral hairs black in part; punctures on medial area of mesopleuron nearly contiguous; basal depression of mandible wide ..... *pygmaeus* (Friese)  
Hind basitarsus with ventral hairs light; punctures on medial area of mesopleuron well separated; basal depression of mandible linear ... 3
- 3(2). Punctures on upper part of clypeus foveolate, larger than those on frons; frons with punctures contiguous; eyes slightly diverging above (ratio of upper interorbital distance at level of lateral ocelli/minimal lower interorbital distance < 1.35) ..... *furcatus* NEW SPECIES  
Punctures on upper part of clypeus fine, not foveolate, not larger than those on frons; frons with punctures not contiguous; eyes strongly diverging above (ratio of upper interorbital distance at level of lateral ocelli/minimal lower interorbital distance > 1.4) .....  
..... *corumbae* (Cockerell)

## Females

1. Upper margin of mandible with basal, dorsoventrally flattened projection; abdominal scopa largely black ..... *pygmaeus* (Fries)
  - Upper margin of mandible without projection; abdominal scopa white except sometimes on S5 ..... 2
- 2(1). Scutum with broad median zone covered with coarse transverse rugulae; mesopleural surface granular; scutellum rounded in profile; apical hair of T6 dark brown ..... *pharcidontus* (Moure)
  - Scutum without transverse rugulae; mesopleural surface shiny; scutellum flat in profile; apical hair of T6 black ..... 3
- 3(2). Facial projection carinate, with deep V-shaped emargination in dorsal view; labrum with conical basomedial projection; clypeus in part with large shiny interspaces between punctures .... *furcatus* NEW SPECIES
  - Facial projection not carinate, with shallow rounded emargination in dorsal view; labrum with low, notched basomedial projection; clypeus contiguously punctate or essentially so ..... *corumbae* (Cockerell)

*MICROTHURGE PYGMAEUS* (FRIESE)

*Material Examined*.—(New Records) ARGENTINA. *SALTA*: Rosario de Lerma, 10–14 Nov 1983, malaise trap, M. Wasbauer, 5 males, 17 females (Logan); same except 4–8 Nov 1983, 6 females; Rosario de Lerma, Oct 1984, M. Fritz, 1 male (Logan); same except Oct 1985, 1 male, 4 females (Logan); same except Oct 1986, 2 males (Logan). *CÓRDOBA*: LaCumbre, 1140 m, 21 Nov 1975, R. M. Bohart, 12 males, 7 females (Davis, Logan). *JUJUY*: Perico, S of Jujuy, 21 Oct 1968, L. E. Peña, 1 female (New York). *CATAMARCA*: Alijilan, 3 Nov 1972, *Argemone* sp., G. E. Bohart, 1 female (Logan). *TUCUMÁN*: Tucumán, 19 Oct 1972, *Argemone subfusiformis* G. B. Ownbey, G. E. Bohart, 1 male, 2 females (Logan); Cadillal, 4 Dec 1975, R. M. Bohart, 1 male (Logan).

*MICROTHURGE PHARCIDONTUS* (MOURE)

*Redescription*.—Male. Length, 5–7 mm; forewing length, 4–5 mm. Basal depression of mandible linear; pair of tubercles on supraclypeal area small and close or absent; punctures on upper part of clypeus foveolate, larger than punctures on frons; scutum roughened medially by transverse rugulae; mesopleural surface granular.

*Diagnosis*.—The transversely rugulose scutum, granular mesopleuron, and rounded rather than flat scutellum are unique to *M. pharcidontus*. Males share these unique characteristics, though the rugulae of the scutum are less well-developed.

*Discussion*.—Additional material available for this study supports the tentative association by Michener (1983) of males from Guayaramerin, El Beni, Bolivia with *M. pharcidontus*.

*Material Examined*.—(New Records) ARGENTINA. *SALTA*: Dique Itiyuro, nr Pocitos, 14 Aug 1976, C. Porter, L. Stange (Lawrence). *TUCUMÁN*: Tucumán, 19 Oct 1972, *Argemone subfusiformis* G. B. Ownbey, G. E. Bohart, 1 male (Logan); San José, Rio Marija, 3 Nov 1972, *Opuntia sulphurea* G. Don, G. E. Bohart, 1 male (Logan); Horco Molle, 4 Jan 1976, R. M. Bohart, 1 male, 2 females (Davis, Logan).

*MICROTHURGE CORUMBAE* (COCKERELL)

*Lithurgus corumbae* Cockerell, 1901. Proc. Acad. Nat. Sci. Phil., 1901: 216. Type deposited in Pittsburgh.

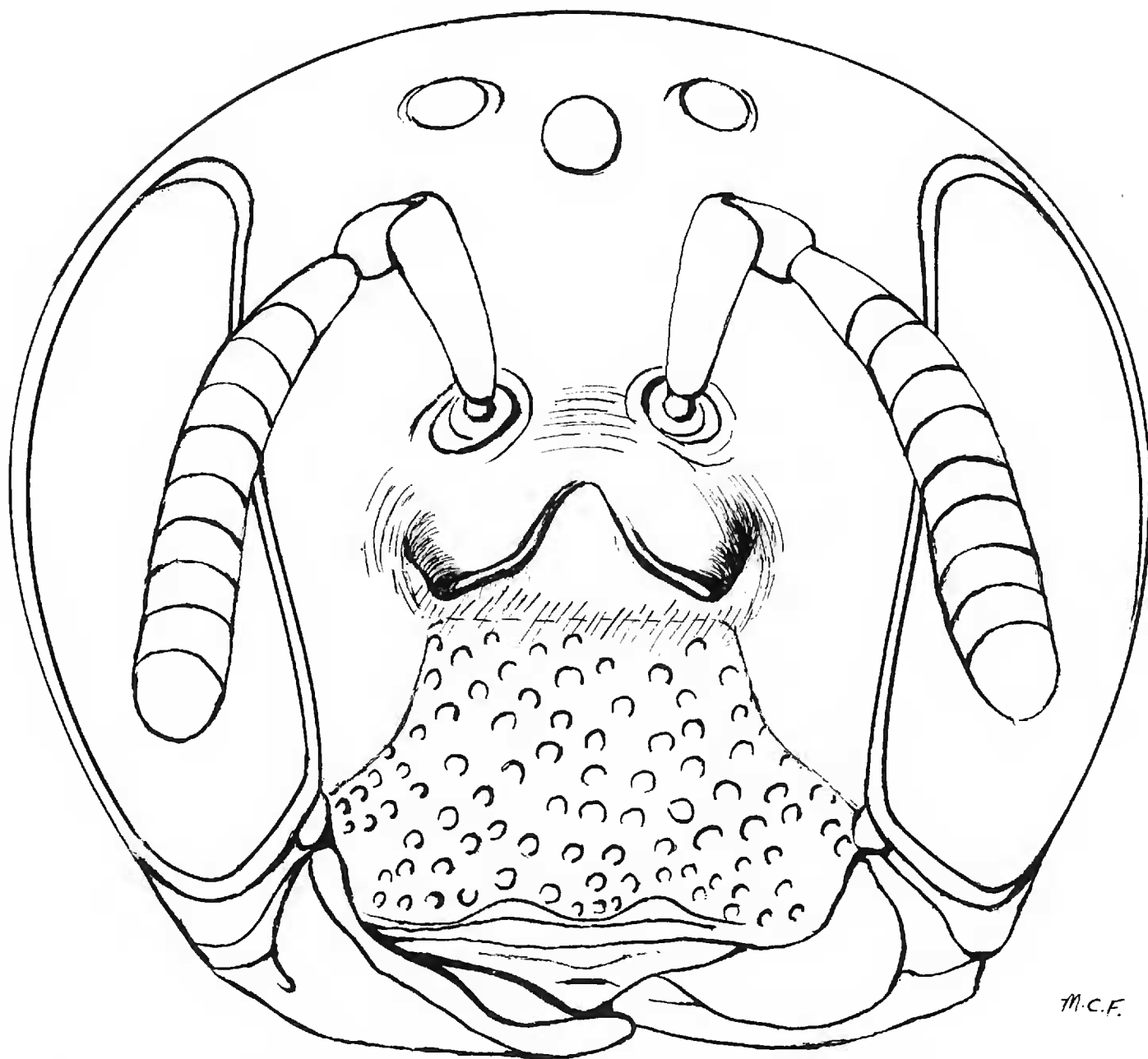


Figure 1. Head of *Microthurge furcatus*, female. Punctuation shown only for clypeus.

*Microthurge boharti* Michener, 1983. Pan-Pacif. Entomol., 59: 186. NEW SYNONYMY. Type deposited in Buenos Aires.

*Diagnosis.* — Males have eyes more strongly diverging above than in *M. furcatus* (ratio of upper interocular distance at level of lateral ocellus/minimal lower interocular distance 1.41–1.52;  $n = 8$ ,  $\bar{x} = 1.46$ ).

*Discussion.* — The holotype female of *Lithurgus corumbae* Cockerell from Corumba, Mato Grosso, Brazil, was recently located in the entomological collection of the Carnegie Museum of Natural History. It appears to be the same as *Microthurge boharti* from Córdoba Province, Argentina, despite the geographic separation and apparent ecological differences between the moist tropical region of Corumba and the more xeric environment of Córdoba. The only discernable difference is the slightly better developed frontal prominence in specimens from Argentina. This may be size related, because there appears to be size-dependent variation among the Corumba specimens.

*Material Examined.* — (New Records) BRAZIL. MATO GROSSO: Corumba, Apr, 4 males, 28 females (Philadelphia, Logan); same except Mar, 2 females (Philadelphia).

*MICROTHURGE FURCATUS* GRISWOLD, NEW SPECIES  
(Fig. 1)

*Types*.—Holotype, female, data: BOLIVIA. *COCHABAMBA*: Peña Colorada, 1800 m, 21 Feb 1976, L. E. Peña. Paratypes; 7 males, data same as holotype; 3 males, 1 female, data: BOLIVIA. *COCHABAMBA*: (no local data), Nov 1976, L. E. Peña. Holotype deposited in American Museum of Natural History, New York; paratypes deposited in the American Museum of Natural History and USDA Bee Biology and Systematics Laboratory, Logan, Utah.

*Female*.—Length, 7.5–8 mm; forewing length 6 mm. Body black, apical tarsi red; wings heavily infuscated. Pubescence white; scopa off-white except for few dark hairs laterally and apically on S5. Mandible without projection basally on upper margin; labrum with basomedial cone-shaped projection; clypeus with punctures on disk scattered; facial projection carinate, in dorsal view with wide V-shaped notch; scutum without transverse rugulae; scutellum flat in profile; mesopleuron shiny, with punctures separated.

*Male*.—Length, 6–7 mm; forewing length, 4.5–5 mm. Basal depression of mandible linear; punctures on upper part of clypeus foveolate, larger than those on frons; punctures of frons contiguous; eyes slightly diverging above (ratio of upper interocular distance at level of lateral ocelli/minimal lower interocular distance 1.22–1.33;  $n = 10$ ,  $\bar{x} = 1.28$ ); ventral hairs on hind basitarsus all light.

*Diagnosis*.—*Microthurge furcatus* seems most closely related to *M. corumbae*. Males of the two species are very difficult to separate, differing as far as I can tell only by slight differences in punctation and by the less divergent inner eye margins. Females are more easily separated. In addition to the characters given in the key, the mandible is covered with a few large punctures, has a very strong dorsal carina, and is abruptly and strongly depressed basally. The mandible of *M. corumbae* has numerous small punctures, a weak dorsal carina, and is only slightly depressed basally.

*Material Examined*.—See types.

#### ACKNOWLEDGMENT

I thank John Rawlins and Robert Davidson (Carnegie Museum of Natural History, Pittsburgh) for assistance in locating and studying the type of *Lithurgus corumbae* and the following individuals and institutions for the loan of material: Manfredo Fritz (Instituto de Investigaciones Entomologicas Salta, Rosario de Lerma, Argentina), Jerome Rozen and Eric Quinter (American Museum of Natural History, New York); Robert Schuster (University of California, Davis); Donald Azuma (Academy of Natural Sciences, Philadelphia); Charles Michener (University of Kansas, Lawrence). Marianne Cha Filbert produced the illustration. This is a contribution from Utah Agricultural Experiment Station, Utah State University, Logan, Utah 84322-4810, Journal Paper Number 4074, and USDA-ARS Bee Biology and Systematics Laboratory, Utah State University, Logan, Utah 84322-5310.

#### LITERATURE CITED

Michener, C. D. 1983. The classification of the Lithurginae. Pan-Pacif. Entomol., 59: 176–187.

*Received 30 October 1990; accepted 14 January 1991.*